



PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference PCT203-0011	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/KR2003/000542	International filing date (day/month/year) 19 MARCH 2003 (19.03.2003)	Priority date (day/month/year) 16 AUGUST 2002 (16.08.2002)
International Patent Classification (IPC) or national classification and IPC IPC7 H04B 1/38		
Applicant PHICOM CORPORATION et al		

<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>4</u> sheets, including this cover sheet.</p> <p><input type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of _____ sheets.</p>	
<p>3. This report contains indications relating to the following items:</p> <p>I <input checked="" type="checkbox"/> Basis of the report</p> <p>II <input type="checkbox"/> Priority</p> <p>III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p>IV <input type="checkbox"/> Lack of unity of invention</p> <p>V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p>VI <input type="checkbox"/> Certain documents cited</p> <p>VII <input type="checkbox"/> Certain defects in the international application</p> <p>VIII <input checked="" type="checkbox"/> Certain observations on the international application</p>	

Date of submission of the demand 15 MARCH 2004 (15.03.2004)	Date of completion of this report 29 NOVEMBER 2004 (29.11.2004)
Name and mailing address of the IPEA/KR  Korean Intellectual Property Office 920 Dunsan-dong, Seo-gu, Daejeon 302-701, Republic of Korea Facsimile No. 82-42-472-7140	Authorized officer UHM, In Kwon Telephone No. 82-42-481-5712 

1. Basis of the report

1. With regard to the elements of the international application:*

- ☒ the international application as originally filed
- ☐ the description:
pages _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☐ the claims:
pages _____, as originally filed
pages _____, as amended (together with any statement) under Article 19
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☐ the drawings:
pages _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☐ the sequence listing part of the description:
pages _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language English which is

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☒ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheet _____

5.

- ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed." and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**1. Statement**

Novelty (N)	Claims	1-6	YES
	Claims		NO
Inventive step (IS)	Claims	1-6	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-6	YES
	Claims		NO

2. Citations and explanations (Rule 70.7)

Reference is made to the following documents:

D1 = KR 10-2000-52066 A (2000.08.16)

D2 = JP 10051876 A (1998.02.20)

Novelty

Neither D1 nor D2 reveals this invention's composition which comprises a yoke, a magnet, an upper plate, a mastoid, an acoustic vibrating plate, an auxiliary vibrating plate, a voice coil and a front cap. Therefore, the invention according to claims 1-6 is considered to be novel.

Inventive step

Claims 1-6 relate to a subminiature bone conduction speaker using a plate capable of vibrating the skull bone and stimulating the auditory nerve so that sound can be heard and a mobile phone having the subminiature bone conduction speaker can be used.

D1 discloses a device for setting a bone conduction oscillator to diversify the application for people who have difficulty in hearing because of inner ear problems, by attaching a bone conduction oscillator to a headband or a hat.

D2 teaches a bone vibration microphone formed in a banana shape having a recessed part, a movable means and a vibration response means.

Comparing the present invention according to claims 1-6 with either D1 or D2, they are similar in that they are related to a bone conduction speaker which directly vibrates the skull bone and stimulates the auditory nerve for hearing the sound. But, the composition of the invention is different from that of either D1 or D2 because neither D1 nor D2 reveals this invention's composition which comprises a yoke, a magnet, an upper plate, a mastoid, an acoustic vibrating plate, an auxiliary vibrating plate, a voice coil and a front cap.

Therefore, claims 1-6 of this invention are considered to involve an inventive step.

Industrial Applicability

The subject matter of claims 1-6 fulfills the requirements of Article 33(4) PCT because it is useful.

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VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

In Claim 1 of the invention, the expression, "A subminiature bone conduction speaker using a vibrating plate comprising" is so obscure that it is not clear which part of the invention or vibrating plate comprises a body, a yoke, a ring type magnet etc.